



LONG-LASTING ANTI-COAGULANTS (SUPER WARFARIN)

Agent Overview:	Warfarin (Coumadin, or <i>bis</i> -hydroxycoumarin) is used therapeutically as anticoagulants and once was used commercially as rodenticides. Several long-acting coumadin derivatives (superwarfarins like brodifacoum, diphenadione, chlorophacinone and bromadiolone) can produce profound and prolonged anticoagulation. Most patients are asymptomatic after an unintentional ingestion. Signs of decreased clotting ability (coagulopathy) typically occur within 24-72 hours post significant ingestion of a long-acting anticoagulant, and may present as nose and gum (epistaxis, gingival) bleeding, as well as bloody vomit, urine, feces, or uterus, (hematemesis, hematuria, hematochezia, menometrorrhagia), discoloration, splotching, and bleeding of the skin, tissues, and brain (ecchymosis, petechial hemorrhages, intracranial hemorrhages) or bleeding not in proportion with the injury.
Lab Specimen Submittal:	Authorization by Dr. Jane Getchell, Director DPHL; Christina Pleasanton, Deputy Director DPHL; or Tara Lydick, Chemical Terrorism Coordinator.
Type of Specimens Necessary for Testing:	<u>Urine</u> : 25mL-50mL screw-cap container <u>Whole blood</u> : <ul style="list-style-type: none">- Three, 5 or 7 mL purple-top (EDTA) tubes (vacuum fill only) AND- One, 5 or 7 mL gray-top or green-top (vacuum fill only) AND- Two empty urine cups and two empty blood tubes for each lot # submitted.
Packaging Instructions:	<u>Urine</u> : freeze specimen upon collection and ship on dry ice; label specimens and package individually; wrap with absorbent material. <u>Whole blood</u> : place filled tubes in a shipping rack for stability, wrap the tubes in absorbent material, and secure with tape. Place the packaged tubes in a secondary unbreakable container. Specimens may be shipped cold but <i>must not</i> be frozen. <u>All</u> : wrap sample containers and layers with tamper-proof, waterproof forensic evidence tape initialed by collector, being careful not to cover the sample labels. Ship to DPHL as Biological Substance, Category B (Packing Instruction 650).
Receiving Specimens at DPHL:	Authorized specimens are received at the lab's rear (loading dock) entrance. Submitters must present ID and complete proper forms.
Handling of Specimens:	Follow chain of custody procedures. Freeze urine specimens.
Reporting Results:	Reference laboratory will notify DPHL as soon as possible. The Potential Exposure Call Log and Information form will provide information for notification of testing results outside of the DPHL.
Contact Information:	Jane Getchell, DrPH, Director DPHL, 302-223-1520 (24/7 coverage) 24/7 Emergency Contact Number: 1-888-295-5156 Revised: 04/08